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BOTANICAL GARDENCOMMENTS ON THE TYPIFICATION OF LINNAEAN SPECIES OF
TRILLIUM WITH DESIGNATION OF A LECTOTYPE FOR *T. ERECTUM*
(TRILLIACEAE)

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ABSTRACT

Linnaeus proposed three species of *Trillium* (Trilliaceae) in 1753, of which two, *T. cernuum* and *T. sessile*, have been typified. Gleason designated a Kalm specimen (469.1, LINN) as the lectotype of the first name while Freeman selected a Clayton sheet (BM) as the lectotype for the second. A lectotype is here designated for the third name, *T. erectum*, it being a 1635 Cornut drawing. Linnaeus included several different species under each name he proposed. These are reviewed and their disposition noted.

KEY WORDS: *Trillium*, *T. cernuum*, *T. erectum*, *T. sessile*, Trilliaceae, nomenclature

Rendle (1901) was the first to address the original elements used by Linnaeus (1753) when the first three species of *Trillium* (Trilliaceae) were proposed. Rendle attempted to identify each cited element, but a combination of a lack of available types and recent changes in nomenclature call for a review.

Under *Trillium cernuum* Linnaeus, Linnaeus (1753: 339) cited Colden's (1749: 113) description, for which there are no known specimens, and a Catesby (1730: 45, t. 45) figure. Linnaeus also had a Pehr Kalm collection (469.1, LINN). Rendle (1901: 332) identified the plant in the Catesby figure as *T. catesbyi* Elliott. The Kalm sheet, he felt, was representative of *T. cernuum*. Gleason (1906: 390) subsequently designated (as "type") the Kalm sheet at LINN as the lectotype of the species. A duplicate is at UPS.

Trillium erectum was first named by Linnaeus (1745: 12; cited in 1753 from Linnaeus, 1749: 154), "Paris foliis ternis, flore pedunculato erecto", in a dissertation on the plants in the Burser herbarium (UPS). Burser had sent

a duplicate specimen to Bauhin who, in 1620, named it "Solanum tryphyllon Brasilianum"; later, Bauhin (1623: 167) called it "Solanum triphyllon Brassilianum". All three names were cited by Linnaeus in 1753 (p. 340). In *Species Plantarum* Linnaeus also cited Cornut's (1635: 166) name, "Solanum triphyllum Canadense", and figure (t. 167), along with its redrawing by Morison (1699, s. 13, t. 3, f. 7) who called it "Solano congener triphyllum Canadense" (p. 532).

From Kalm, Linnaeus acquired a specimen (469.2, LINN) he took to be *Trillium erectum*. This is a flowerless specimen of *Medeola virginica* Linnaeus, as Asa Gray later discovered when he examined and annotated the sheet. Smith (1817: under *Trillium*) had reported earlier that the specimen was not *T. erectum*.

According to Bauhin (1620: 91), his specimen "hoc in sylvis Brasiliae apud Tououpinambaultios copiose reperitur, referent Pharmacopaeo Gallo, qui una cum aliis D. Bursero communicavit". Bauhin used "Brasilia" usually, but not always, for a location in southeastern Canada. The Burser specimen Linnaeus examined (*Herb. Burser* III:12, UPS) is *Trillium grandiflorum* Salisbury.

As little would be served by lectotypifying *Trillium erectum* on the Kalm specimen of *Medeola virginica* or the Burser herbarium sheet of *T. grandiflorum*, I hereby lectotypify the name on Cornut t. 167. 1635, the only authentic element of *T. erectum* as now circumscribed. Cornut said the petals were purplish black, and in the illustration they appear to be more than two centimeters in length. The leaves are not indicated to be streaked and are clearly more than four centimeters long and broad. I concluded that the Cornut figure represents what Scoggin (1978: 509) would call f. *erectum*. In my opinion, all formae within the species are of doubtful taxonomic significance.

Turning finally to *Trillium sessile* Linnaeus (1753: 430), the array of species included under this name was reviewed by Freeman (1975). Rendle (1901: 321) noted that the Gronovius (1739: 44) reference cited by Linnaeus was based on *Clayton 856* (BM), although this number appears only on the sheet and in the second edition of *Flora Virginica* (Gronovius 1762: 56). At first, Gronovius made no reference to a Clayton specimen, but did cite a Clayton phrase name in synonymy; this name is written on *Clayton 856*. I believe that "856" was added to the sheet after Clayton stopped supplying Gronovius with Virginia specimens. It is among a series of specimens not assigned numbers in 1739 but given numbers by 1762. I believe Linnaeus saw this sheet when he worked with Gronovius on *Flora Virginica* in the 1730s, and therefore it can qualify, in spite of its late number, as authentic material.

Clayton 856 was designated the lectotype of *Trillium sessile* by Freeman (1975: 11).

As for the other authentic material, Linnaeus (1753: 340) cited a Plukenet (1696: 352) polynomial and its accompanying illustration (Plukenet 1691: t. 111). Rendle (1901: 322) implied, and Freeman (1975: 11) repeated, that the

figure was based on a specimen in the Sloane herbarium (*H.S.* 90:95, BM-SL). In fact, the Plukenet figure is a copy of a drawing made by John Banister (original, BM). I suspect, however, that 90:95 is a Banister collection and may be regarded as a voucher for both the figure and Banister's own name published by Ray (1688: 1928). The specimen is *Trillium sessile*.

Linnaeus (1753: 340) cited another Catesby (1730: 50, t. 50) figure. Freeman (1975: 27) identified the plant as *Trillium maculatum* Raf. Linnaeus also had a Virginia specimen when he proposed *T. sessile*: Clayton 536, 469.3 (LINN); duplicate at BM. The plants on both sheets are *T. pusillum* Michx. var. *virginianum* Fernald, and represent the oldest known specimens of this uncommon plant.

Linnaeus had a broad species definition in many groups of plants, but that expressed in *Trillium* is greater than normal. Certainly the lack of material contributed to this, aggravated all the more by his inability to have all of the material together at one time for a final critical review as he was writing *Species Plantarum*.

This is important to remember when examining Linnaeus's original material. He accounted for many names proposed in the past, including ones he created himself based on specimens seen years before or knew from illustrations that were often dubious. He then applied those names, as best he could, to specimens he eventually obtained. Today, one can take out a flora or a recent monograph, spread out numerous specimens, and compare the proposed type with them. Linnaeus had no such opportunity.

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